

Amendments to the Claims

Please amend the claims as detailed below. This listing of claims will replace all prior versions, and listings, of claims in the application:

1-16 (Cancelled)

17. (Currently amended) A storage appliance comprising:

a network interface; and

a storage medium; and

a controller coupled to the network interface and the storage medium and
configured

to provide a root partition on the storage medium, the root partition
defining a plurality of characteristics of a redundant array (RA) group that
includes a plurality of RA partitions,

to provide a RA partition on the storage medium, the RA partition being
one of the plurality of RA partitions,

to receive, via the network interface, a data access command multicast to
the plurality of RA partitions, and

to determine that the data access command pertains to the RA partition
based at least in part on the plurality of characteristics.

18. (Previously presented) The storage appliance of claim 17, wherein the controller is
further configured

to receive, via the network interface, a plurality of partition commands from a
host; and

to provide the root partition and the RA partition based at least in part on the
plurality of partition commands.

19. (Previously presented) The storage appliance of claim 17, wherein the plurality of
characteristics includes a multicast set associated with the RA group.

20. (Previously presented) The storage appliance of claim 19, wherein the controller is configured to receive a multicast set command from a host via the network interface, and to establish the multicast set associated with the RA group based at least in part on the multicast set command.

21. (Previously presented) The storage appliance of claim 17, wherein the data access command is multicast to the plurality of RA partitions using an Internet Protocol address.

22. (Previously presented) The storage appliance of claim 17, wherein the controller is further configured

to receive, via the network interface, another data access command multicast to the plurality of RA partitions;

to receive, via the network interface, a response to the another data access command; and

to disregard the another data access command based at least in part on the response.

23. (Currently amended) The storage appliance of claim 17, wherein the ~~root-partition~~ plurality of characteristics includes a type of the RA group and a description of the plurality of RA partitions and the controller is further configured to determine that the data access command pertains to the RA partition based at least in part on the type of the RA group and the description of the plurality of RA partitions.

24. (Currently amended) The storage appliance of claim 23, wherein the type is a stripe and the ~~root-partition~~ plurality of characteristics further includes a length of the stripe.

25. (Currently amended) The storage appliance of claim 17, wherein the ~~root-partition~~ plurality of characteristics includes a parity rule.

26. (Previously presented) The storage appliance of claim 17, wherein the plurality of RA partitions are associated with a plurality of logical block addresses (LBAs) and the controller is further configured

to calculate, based at least in part on the plurality of characteristics of the RA group defined in the root partition, which LBAs of the plurality of LBAs are associated with the RA partition.

27. (Previously presented) The storage appliance of claim 17, wherein the controller is configured to receive the data access command from a host and the controller is further configured

to transmit, via the network interface, data directly to another RA partition of the plurality of RA partitions based at least in part on the data access command.

28. (Currently amended) A method comprising:

providing, on a storage medium, a root partition having a plurality of characteristics associated with a redundant array (RA) group that includes a plurality of RA partitions,

providing, on the storage medium, an RA partition of the plurality of RA partitions,
receiving, via a network interface, a data access command multicast to the plurality of RA partitions, and

determining that the data access command pertains to the RA partition based at least in part on the plurality of characteristics

~~receiving, via the network interface, one or more commands from a host; and~~
~~providing the root partition and the RA partition based at least in part on the received one or more commands.~~

29. (Cancelled)

30. (Currently amended) The method of claim 29~~28~~, wherein the plurality of characteristics includes a multicast set associated with the RA group.

31. (Currently amended) The method of claim 29~~28~~, wherein the ~~RA~~data access command is multicast to the plurality of RA partitions using an Internet Protocol address.

32. (Currently amended) The method of claim 29~~28~~, further comprising:
receiving, via the network interface, another data access command multicast to the plurality of RA partitions;
receiving, via the network interface, a response to the another data access command; and
disregarding the another data access command based at least in part on the received response.

33. (Currently amended) The method of claim 28, wherein the ~~root partition~~plurality of characteristics includes a type of the RA group and a description of the plurality of RA partitions and said determining that the data access command pertains to the RA partition is based at least in part on the type of the RA group and the description of the plurality of RA partitions.

34. (Currently amended) The method of claim 33, wherein the type is a stripe and the ~~root partition~~plurality of characteristics further includes a length of the stripe.

35. (Currently amended) The method of claim 28, wherein the plurality of characteristics ~~root partition~~includes a parity rule.

36. (Currently amended) A machine-accessible storage medium having instructions, which, when executed, results in the machine:

providing a root partition on a storage medium, the root partition defining a plurality of characteristics of a redundant array (RA) group that includes a plurality of RA partitions,

providing a RA partition on the storage medium, the RA partition being one of the plurality of RA partitions,

receiving, via a network interface, a data access command multicast to the plurality of RA partitions, and

determining that the data access command pertains to the RA partition based at least in part on the plurality of characteristics.

37. (Previously presented) The machine-accessible storage medium of claim 36, wherein the instructions, when executed, further results in the machine:

receiving, via the network interface, one or more commands from a host; and
providing the root partition and the RA partition based at least in part on the received one or more commands.

38. (Previously presented) The machine-accessible storage medium of claim 36, wherein the plurality of characteristics includes a multicast set associated with the RA group.

39. (Previously presented) The machine-accessible storage medium of claim 36, wherein the data access command is multicast to the plurality of RA partitions using an Internet Protocol address.

40. (Currently amended) An apparatus comprising:

a network interface; and

a controller configured

to transmit, via the network interface, a first partition command to
establish a root partition on a storage ~~appliance~~medium;

to transmit, via the network interface, a plurality of characteristics of a redundant array (RA) group, which ~~that~~ includes a plurality of RA partitions, to be stored in the root partition;

to transmit, via the network interface, a second partition command to establish a RA partition of the plurality of RA partitions, on the storage appliance ~~medium~~; and

to multicast, via the network interface, a packet to the plurality of RA partitions, the packet having a data access command and a logical block address (LBA) to which the data access command pertains, the LBA associated with only a subset of the plurality of RA partitions.

41. (Currently amended) The apparatus of claim 40, wherein the controller is further configured to transmit a partition command to each of a plurality of storage appliances associated with a respective plurality of storage media to establish the plurality of RA partitions.

42. (Cancelled)

43. (Previously presented) The apparatus of claim 42, wherein the controller is configured to multicast the packet by being configured to transmit the packet with a multicast Internet Protocol address.

44. (New) The method of claim 28, further comprising:
receiving, via the network interface, one or more commands from a host; and
providing the root partition and the RA partition based at least in part on the received one or more commands.